For Dynkin's problem *without* a finite constraint, Lepeltier and Maingueneau [1] and Stettner [3] have already proved the aggregation and the coincidence of the value processes without any conditions.

References

[1] J.P. Lepeltier and M.A. Maingueneau, Le jeu de Dynkin en theorie generale sans l'hypothese de Mokobodski, Stochastics 13 (1984) 25-44.
[2] Y. Ohtsubo, Neveu's martingale conditions and closedness in Dynkin stopping problem with a finite constraint, Stochastic Process. Appl. 22 (1986) 333-342.
[3] L. Stettner, On closedness of general zero-sum stopping game, Bull. Polish Acad. Sci. Math. 32 (1984) 351-361.

Notes on the Classical Dynkin Stopping Problem

M. Yasuda, *Chiba University, Chiba, Japan*

E.B. Dynkin (1969) and E.B. Frid (1969) proposed a game version of the stopping problem for Markov processes, in which strategies are subject to the condition of the prescribed disjoint subsets in the state space. Under this condition simultaneous stopping does not occur and so, switching the move of the game makes the problem simple. We shall show that some problems of the classical Dynkin stopping problem could be reduced to the standard optimal stopping problems for the same Markov process. As a related topic, singular stochastic control (impulse control) is considered.

2.14. Queueing, storage and related models

Fast Simulation Techniques based on Large Deviations Theory

V. Anantharam, *Cornell University, Ithaca, NY, USA*

Let W_k denote the waiting time of customer k, $k \geq 0$, in an initially empty GI/G/1 queue. Fix $a > 0$. We prove weak limit theorems describing the behaviour of W_k/n, $0 \leq k \leq n$, given $W_n > na$. Let X have the distribution of the difference between the service and interarrival distributions. We consider queues for which Cramér type conditions hold for X, and queues for which X has regularly varying positive tail.

A natural transient performance criterion for a network design is the probability of the event that any one of the first N customers entering the initially empty network incurs a delay of at least T seconds. N and T are specified to the designer. We study the Monte Carlo simulation of this criterion for a tandem of GI/G/1 queues with renewal arrivals, under Cramér type conditions on the interarrival and service distributions. We describe a technique to speed up the simulation of this criterion, which is asymptotically optimal in a certain sense.